A REVISED KEY AND NOTES ON THE TASMANIAN GENERA OF CHRYSOMELINAE (COLEOPTERA: CHRYSOMELIDAE)

by David W. de Little

(with four text-figures, three plates and one table)

de Little, D.W. 2011 (9:xii): A revised key and notes on the Tasmanian genera of Chrysomelinae (Coleoptera: Chrysomelidae). *Papers and Proceedings of the Royal Society of Tasmania* 145: 17–26. ISSN 0080-4703. Tasmanian Museum and Art Gallery, GPO Box 1164, Hobart, Tasmania 7001, Australia. Email: dcdelittle@bigpond.com

Fifteen genera of Chrysomelinae (Coleoptera: Chrysomelidae) are recognised from Tasmania, Australia. An illustrated key to the adults of genera in Tasmania is provided, together with notes on Tasmanian representative species and their host plants where known. Several species are regarded as pests of Tasmanian forest and plantation trees.

Key Words: Chrysomelinae, Chrysomelidae, leaf beetle, Tasmania, host, pest, forest, tree plantation, *Calomela, Chalcolampra, Chalcomela, Dicranosterna, Ethomela, Eugastromela, Ewanius, Faex, Geomela, Palaeomela, Paropsides, Paropsis, Paropsisterna, Peltoschema, Trachymela.*

INTRODUCTION

The leaf beetle sub-family Chrysomelinae contains a number of species that are prominent defoliators of *Eucalyptus* (*sensu lato*) spp. and *Acacia* spp. in Tasmania, especially the Tasmanian Eucalyptus Leaf Beetle, *Paropsisterna bimaculata* (Olivier, 1807), the Southern Eucalyptus Leaf Beetle, *P. agricola* (Chapuis, 1877) and the Fireblight Beetle, *Peltoschema orphana* (Erichson, 1842). Daccordi & de Little (2003) provided a key to adults of the Tasmanian genera of Chrysomelinae, based on the key of Matthews & Reid (2002) for South Australian genera, but overlooked the genera *Eugastromela* Lea, 1929 and *Chalcomela* Baly, 1856.

Reid (2006) revised the Australian genera of Chrysomelinae, providing detailed generic descriptions and including genera with species successfully introduced into Australia as biological control agents. The most significant impact of this work in relation to the Chrysomelinae of Tasmania is the synonymy of the economically important genus *Chrysophtharta* Weise, 1901 with *Paropsisterna* Motschulsky, 1860 (senior synonym).

The current paper revises the generic key in Daccordi & de Little (2003) in line with Reid's (2006) revision and includes the two overlooked genera. Notes are provided on the currently recognised Tasmanian genera of Chrysomelinae, and, where known, their host-plants. *Chrysolina* spp. introduced into Tasmania as biological control agents against Boneseed, *Chrysanthemoides monilifera* (L.) T. Norl., are not considered at the current time to have successfully established (Ireson 2002), and this genus is therefore not included in the key.

MATERIAL EXAMINED

Specimens from the following collections were examined: Tasmanian Museum and Art Gallery (Rosny, Tasmania) (TMAG); and Tasmanian Department of Primary Industry, Parks, Water and Environment (New Town, Tasmania) (TASAG).

THE TASMANIAN CHRYSOMELINAE

The Chrysomelinae fauna of Tasmania resembles a subset of the continental Australian fauna, but lacks the genera from the tropical/subtropical rainforest. The two landmasses were connected in the late Pleistocene, and there is similarity between island and continental floras. Tasmanian floristic endemism is greatest in the climatically aseasonal-wet western region of the island and shows a strong archaic Gondwanan influence (Rozefelds 2008).

Of the 43 native genera of Chrysomelinae that occur in mainland Australia (Reid 2006, Reid *et al.* 2009), 14 also occur in Tasmania, together with the one endemic monotypic genus, *Ewanius* Reid, 2002, which occurs on the archaic Gondwanan element, *Nothofagus* Blume. The genera occurring on plant genera *Eucalyptus* L'Hér. and *Acacia* Mill., also widely spread throughout Australia, are relatively well known and collected due to the prominence and economic importance of their hosts. Genera occurring on other hosts in Tasmania are relatively poorly known and infrequently collected, e.g., *Ewanius*, and it is quite possible that new species and even new genera await discovery.

Paropsides is the most widely distributed of the genera occurring in Tasmania. It occurs from eastern Siberia through eastern Asia, Indonesia, New Guinea and Eastern Australia (Daccordi 1994). Reid (2006), however, considers this genus is probably polyphyletic. The endemic monotypic *Ewanius* has interesting possible archaic Gondwanan links with the monotypic *Novacastria* Selman & Lowman, 1983 in eastern mainland Australia, and the monotypic *Araucanomela* Bechyné & Bechyné, 1973 in southern Chile, both also on *Nothofagus* (Reid 2002, Daccordi & de Little 2003).

KEY TO GENERA OF CHRYSOMELINAE IN TASMANIA

1. Procoxal cavities closed, or slightly open (fig. 3A) (2)
- Procoxal cavities widely open (fig. 3F) ..... (4)

2. Third tarsal segment not bilobed (fig. 4G) .... *Chalcolampra* (fig. 1, pl. 1A)
- Third tarsal segment deeply bilobed (fig. 4M) ... (3)

3. Prosternum with two symmetrical carinae; metasternum with plicae (fig. 3A) ..... *Ethomela* (pl. 1C)
- Prosternum without carinae; metasternum without plicae .....*Palaeomela* (pl. 1D)

4. Claws simple (fig. 4H); coxal lines on ventrite 1 deviating from hind coxal cavities (fig. 4K); last article of palpi pointed (fig. 4I); pygidium with deep longitudinal median groove (fig. 4J) ..... (5)
- Claws dentate or appendiculate (figs 4A,E,F); coxal lines following cavity margins (fig. 4C); last article of palpi securiform (figs 4B,N); quadrate or elongate-cylindrical; pygidium without deep median groove ..... (6)

5. Elytra tuberculate and at least partly non-striate; prosternal process broad and flat with sides more-or-less parallel and ridged (fig. 2) ..... *Eugastromela* (pl. 1B)
- Elytra non-tuberculate and striate; prosternal process not as above ..... *Geomela* (pl. 1F)

6. Prosternal process with angled lobe on either side of basal plate (fig. 3F), or with lobe reduced to small round swelling (*Paropsis rubidipes* Blackburn, 1901)..... ..... *Paropsis* (pl. 1E)
- Prosternal process not as above ..... (7)

7. Prothoracic hypomera with deep, curved groove (fig. 3G) ..... *Calomela* (pl. 2A)
- Prothorax hypomera without groove ..... (8)

8. Trichobothrial setae absent from pronotum ..... (9)
- Pronoum with trichobothrial setae at anterior and posterior angles, or only at posterior angles (figs 3B,C) ..... (12)

9. First article of maxillary palpi ventrally flat, with anterior edge straight and sharply keeled (fig. 4N) ....*Dicranosterna* (pl. 2B)
- First article of maxillary palpi not as above ... (10)

10. Apices of mid and hind tibiae expanded with row of short spines on distal face of usually triangular expansion (fig. 4L) ..... *Faex* (pl. 2C)
- Tibiae not expanded externally at the distal apex ... . (11)

11. Elytra with irregular puncturation, acervate or verrucose ..... *Trachymela* (pl. 2D)
- Elytra with regular rows of punctures, or if irregular, then non-verrucose ... *Paropsisterna* (pls 2E, 2F, 3A)

12. All corners of pronotum with trichobothrial setae (Fig. 3B) ..... (13)
- Trichobothrial setae present on posterior angles of pronotum only (fig. 3C) ..... *Peltoschema* (pl. 3B)

13. Claws dentate or appendiculate (figs 4E,F) 14
- Claws simple, without basal tooth (fig. 4D) .... *Chalcomela* (pl. 3C)

14. Claws dentate (fig. 4E), epipleura extended vertically (fig. 3E)..... *Paropsides* (pl. 3D)
- Claws appendiculate (fig. 4F), epipleura visible from sides (fig. 3D) ..... *Ewanius* (pl. 3E)

NOTES ON GENERA

In his revision of the Australian Chrysomelinae, Reid (2006) gives diagnostic descriptions of adults of genera occurring in Tasmania which are not repeated here.

Chalcolampra

Blanchard, C. E. 1853: *Voyage au Pôle Sud et dans l'Océanie sur les corvettes l'Astrolabe et la Zélée; exécuté par ordre du Roi pendant les Années 1837–1840 sous le commandement de M. J. Dumont d'Urville - Zoologie*, 4, p. 328. (figs 1, 4G, pl. 1A)

Material examined: *C. thoracica* Baly, 1855; Hobart, Tasmania; Col.: A.M. Lea (no date); ♀ and ♂; TASAG.

This is a widely distributed possibly polyphyletic genus occurring in southeast Asia and New Zealand as well as Australia where there are approximately 25 species (Daccordi 1994, Reid 2006). Six species are recorded from Tasmania (table 1). Specimens of *C. rufinoda* Lea, 1904 (fig. 1) were not examined by the author.

A wide range of host families is listed for the genus in Australia, including Asteraceae, Lamiaceae, Scrophulariaceae and Pittosporaceae (Reid 2006, Jurado-Rivera *et al.* 2009). Hosts of the species in Tasmania are unknown.

Ethomela

Lea, A. M. 1916: *Transactions of the Royal Society of South Australia* 40: p. 425. (fig. 3A, pl. 1C)

Material examined: *E. hursti* (Blackburn, 1889); Tasmania; Col.: anon.; no date; TASAG; (labelled *Chalcolampra hursti* Blackburn).

This genus is endemic to Australia with 18 described and at least seven undescribed species (Reid 2006). Two species are recorded from Tasmania (table 1). Reported host families are Goodeniaceae (Reid 2006) and Asteraceae (Jurado-Rivera *et al.* 2009) but hosts of the Tasmanian species are unknown.

Palaeomela

Daccordi, M. 1996: *In* P.H.A. Jolivet & M.L. Cox (Eds): *Chrysomelidae Biology*, vol. 1: the Classification, Phylogeny and Genetics. SPB Academic Publishing, Amsterdam: p. 403. (pl. 1D)

No specimens are held in TASAG or TMAG or were examined by the author.

According to Reid (2006) the genus is endemic to southeastern Australia with two described and three undescribed species. Jurado-Rivera *et al.* (2009) give Proteaceae and Rubiaceae as host families. One species is recorded from Tasmania (table 1) and its host is unknown.

Eugastromela

Lea, A. M. 1929: *Transactions of the Royal Society of South Australia* 53: p. 64. (fig. 2, pl. 1B)

No specimens are held in TASAG or TMAG and none were examined by the author.

Reid (2006) considers the genus endemic to southeastern Australia and to contain three species. One species is known in Tasmania (table 1), and its presence there was overlooked by Daccordi & de Little (2003). Host plants are unknown (Reid 2006).

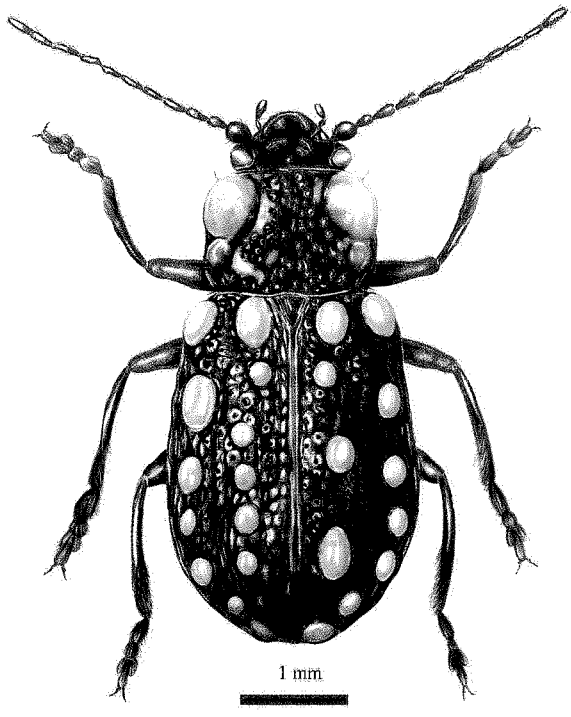


FIG. 1 — Chalcolampra rufinoda *Lea, 1904*

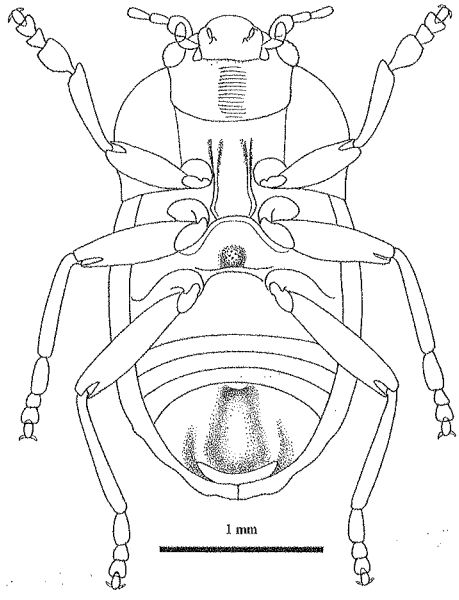


FIG. 2 — Eugastromela spiniventer *Lea, 1929, ventral view.*

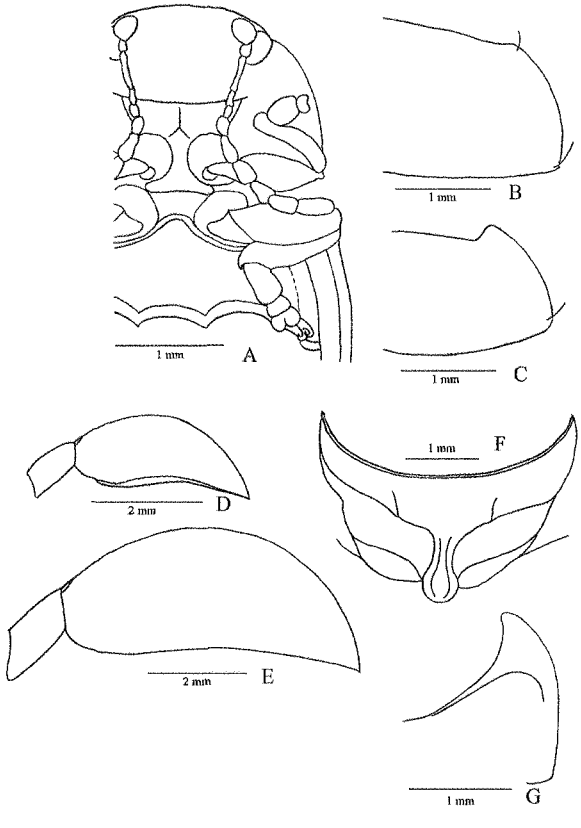


FIG. 3 — *A.* Ethomela hursti *(Blackburn, 1889), ventral view showing head and thoracic sternites. B.* Paropsides catherinae *Daccordi & de Little, 2003, pronotum with trichobothrial setae. C.* Peltoschema orphana *(Erichson, 1842), pronotum with trichobothrial setae. D.* Ewanius nothofagi *Reid, 2002, lateral view. E.* Paropsides catherinae, *lateral view. F.* Paropsis charybdis *Stål, 1860, prosternum. G.* Calomela maculicollis *(Boisduval, 1835), hypomeral groove.*

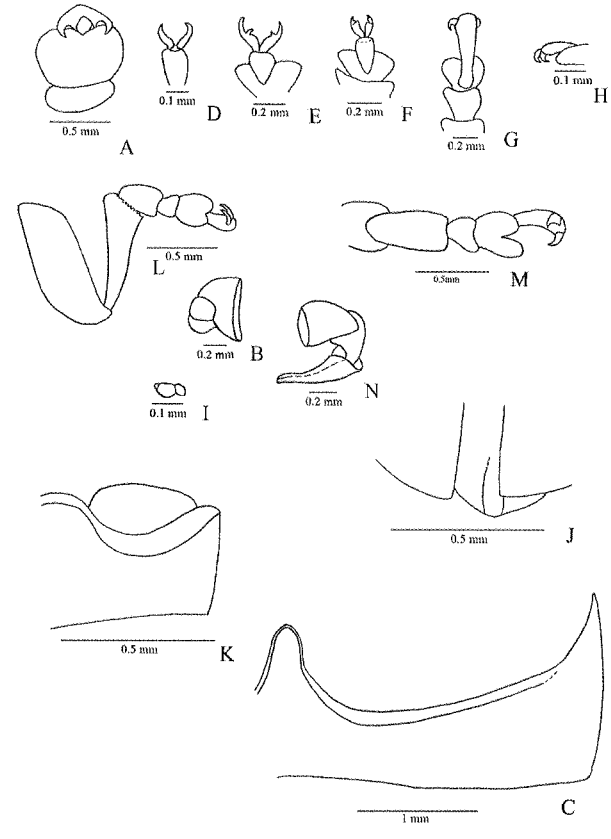
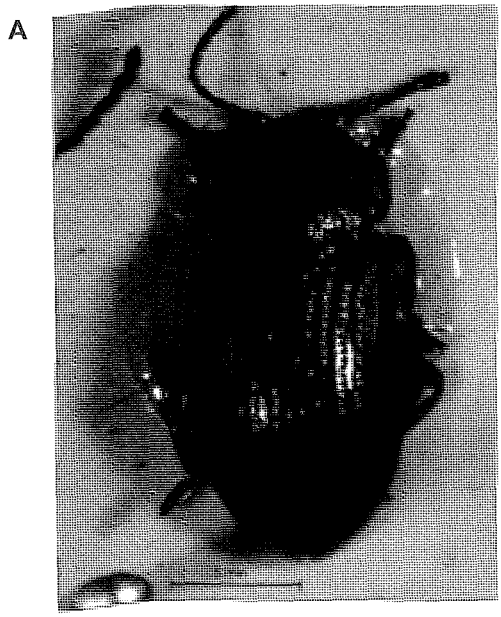
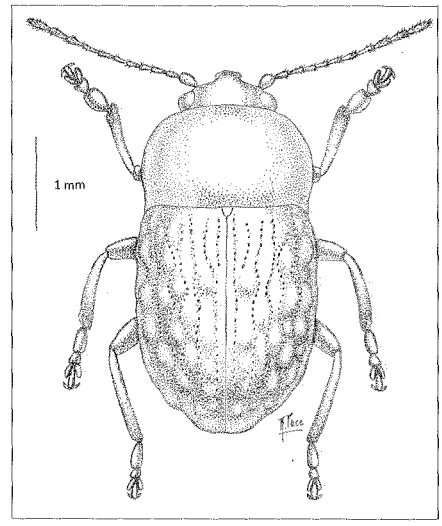


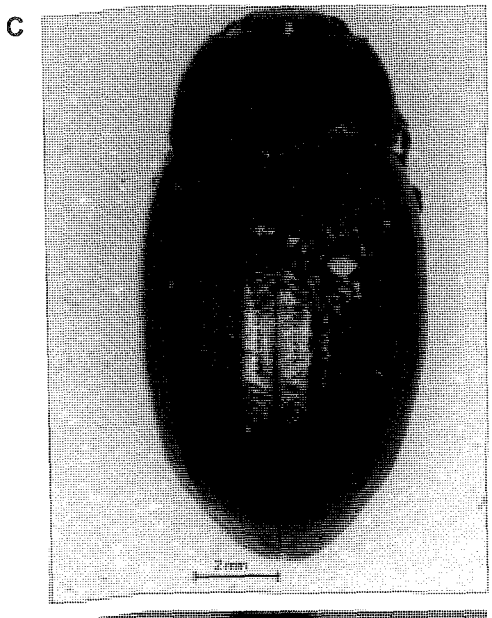
FIG. 4 — *A.* Paropsis charybdis *Stål, 1860, claw. B.* P. charybdis, *maxillary palp. C.* P. charybdis, *coxal line on ventrite 1. D.* Chalcomela cupripennis *(Baly, 1856), claw. E.* Paropsides catherinae *Daccordi & de Little, 2003, claw. F.* Ewanius nothofagi *Reid, 2002, claw.* G. Chalcolampra thoracica *Baly 1855, tarsal segments. H.* Geomela *sp., claw. I.* Geomela *sp., maxillary palp. J.* Geomela *sp., pygidial groove. K.* Geomela *sp. coxal line on ventrite 1. L.* Faex subfasciata planior *(Blackburn, 1898), leg showing expanded hind tibia. M.* Ethomela hursti *(Blackburn, 1889), tarsal segments. N.* Dicranosterna immaculata *(Marsham, 1808), maxillary palp.*

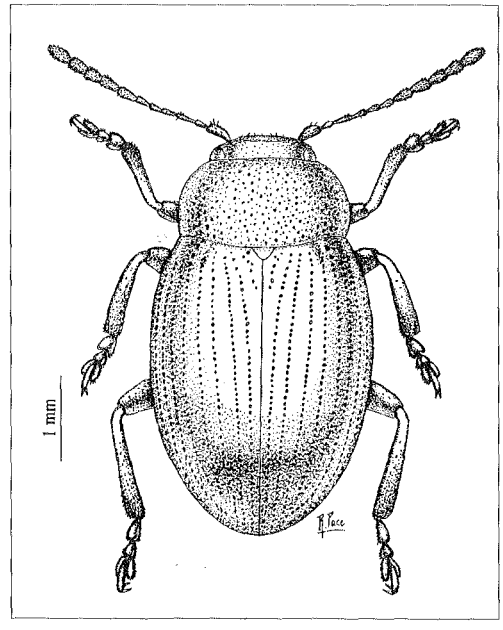
TABLE 1
Described Tasmanian Chrysomelinae genera and species

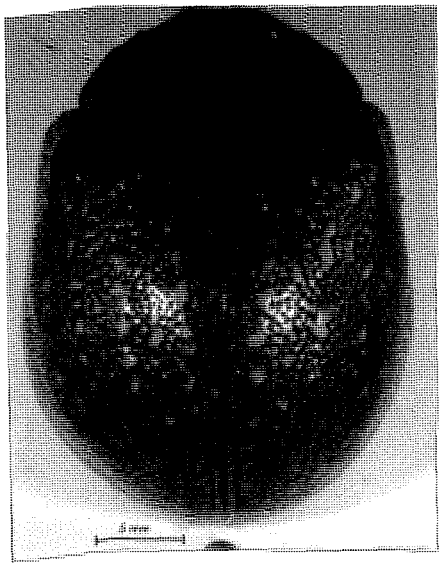
Taxon	References
Calomela Hope, 1840	Daccordi & de Little 2003
C. curtisi (Kirby, 1818)	
C. maculicollis (Boisduval, 1835)	
Chalcolampra Blanchard, 1853	Lea 1902, 1904, 1916, Reid 1993
C. aenea (Boisduval, 1835)	
C. constricta (Erichson, 1842)	
C. multinoda Reid, 1993	
C. pacifica (Erichson, 1842)	
C. rufinoda Lea, 1904	
C. thoracica Baly, 1855	
Chalcomela Baly, 1856	This paper
C. cupripennis (Baly, 1856)	
Dicranosterna Motschulsky, 1860	Daccordi & de Little 2003, this paper
D. immaculata (Marsham, 1808)	
Ethomela Lea, 1916	Lea 1902, 1929; Reid 2006
E. hursti (Blackburn, 1889)	
E. luteicornis (Erichson, 1842)	
Eugastromela Lea, 1929	Lea 1929
E. spiniventer Lea, 1929	
Ewanius Reid, 2002	Reid 2002
E. nothofagi Reid, 2002	
Faex Weise, 1901	Blackburn 1898
F. subfasciata planior (Blackburn, 1898)	
Geomela Lea, 1916	Lea 1916, 1917, Daccordi & de Little 2003
G. beatricis Daccordi & de Little, 2003	
G. bifoveata Lea, 1916	
G. bryophaga Lea, 1916	
G. chiarae Daccordi & de Little, 2003	
G. tasmaniensis Lea, 1917	
Palaeomela Daccordi, 1996	Daccordi & de Little 2003
P. cribricollis (Lea, 1929)	
Paropsides Motschulsky, 1860	Daccordi & de Little 2003
P. calliope (Blackburn, 1898)	
P. catherinae Daccordi & de Little, 2003	
P. nigrolineata (Lea, 1924)	
P. umbrosa (Chapuis, 1877)	
Paropsis Olivier, 1807	Selman 1983
P. aegrota elliotti Selman, 1983	
P. charybdis Stål, 1860	
P. deboeri Selman, 1983	
P. delittlei Selman, 1983	
P. dilatata Erichson, 1842	
P. porosa Erichson, 1842	
P. rubidipes Blackburn, 1901	
P. tasmanica Baly, 1866	
Paropsisterna Motschulsky, 1860	Lea 1902, Weise 1916, Blackburn 1899, Selman 1983; Reid 2006; this paper
P. agricola (Chapuis, 1877)	
P. aurea (Blackburn, 1899)	
P. bimaculata (Olivier, 1807)	
P. crocata (Boisduval, 1835)	
P. decolorata (Chapuis, 1877)	
P. laesa (Germar, 1848)	
P. lignea (Erichson, 1842)	
P. lineata (Marsham, 1808)	
P. morio (Fabricius, 1787)	
P. nobilitata (Erichson, 1842)	
P. nucea (Erichson, 1842)	
P. obliterata (Erichson, 1842)	
P. philomela (Blackburn, 1901)	
P. rufipes (Fabricius, 1801)	
P. subcostata (Chapuis, 1877)	
P. trimaculata (Chapuis, 1877)	
P. variicollis (Chapuis, 1877)	
Peltoschema Reitter, 1880	Lea 1902, Weise 1916, Daccordi & de Little 2003
P. delicatula (Chapuis, 1877)	
P. hamadryas (Stål, 1860)	
P. lepida (Erichson, 1842)	
P. oceanica (Boisduval, 1835)	
P. orphana (Erichson, 1842)	
P. tetraspilota diemensis (Blackburn, 1897)	
P. venusta (Erichson, 1842)	
P. vestalis Daccordi & de Little, 2003	
Trachymela Weise, 1908	Lea 1902, Weise 1916
T. acclivis (Blackburn, 1907)	
T. comma (Blackburn, 1896)	
T. ferrugata (Chapuis, 1877)	
T. papulosa (Erichson, 1842)	
T. rugosa (Chapuis, 1877)	
T. serpiginosa (Erichson, 1842)	











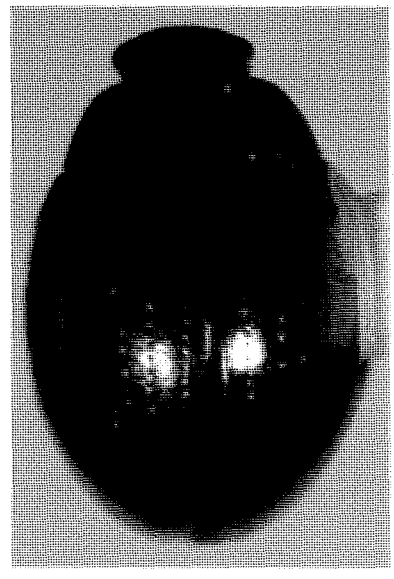


PLATE 1

Habitus images of Tasmanian Chrysomelinae, dorsal view. A. Chalcolampra thoracica *Baly, 1855.* B. Eugastromela spiniventer *Lea, 1904. C.* Ethomela hursti *(Blackburn,1889). D.* Palaeomela cribricollis *(Lea, 1929) (from Daccordi & de Little (2003)). E.* Paropsis tasmanica *Baly, 1866. F.* Geomela *sp.*

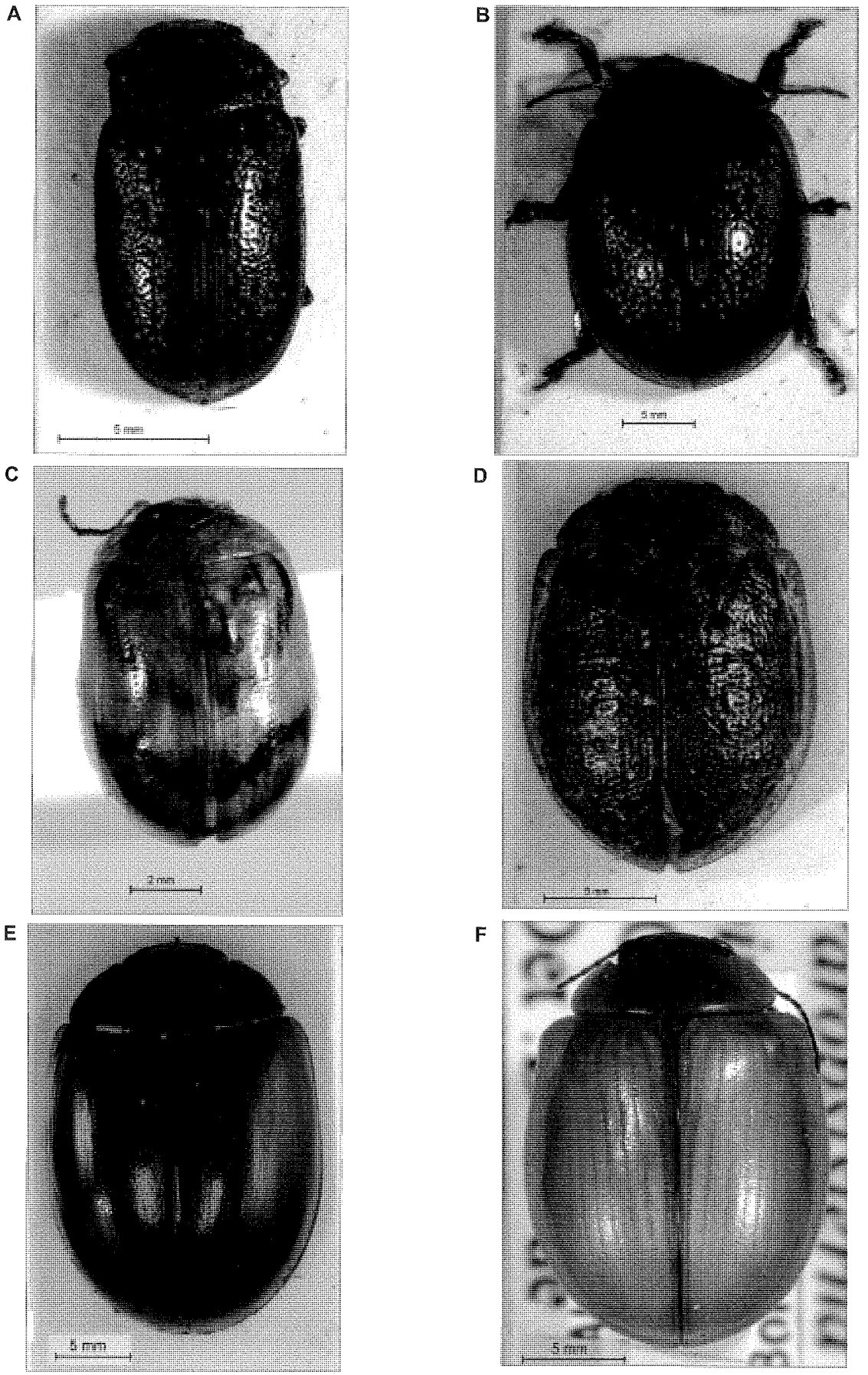


PLATE 2

Habitus images of Tasmanian Chrysomelinae, dorsal view. A. Calomela curtisi *(Kirby, 1818).* B. Dicranosterna immaculata *(Marsham, 1808). C.* Faex subfasciata planior *(Chapuis, 1877). D.* Trachymela comma *(Blackburn, 1896). E.* Paropsisterna morio *(Fabricius, 1787). F.* P. bimaculata *(Olivier, 1807).*

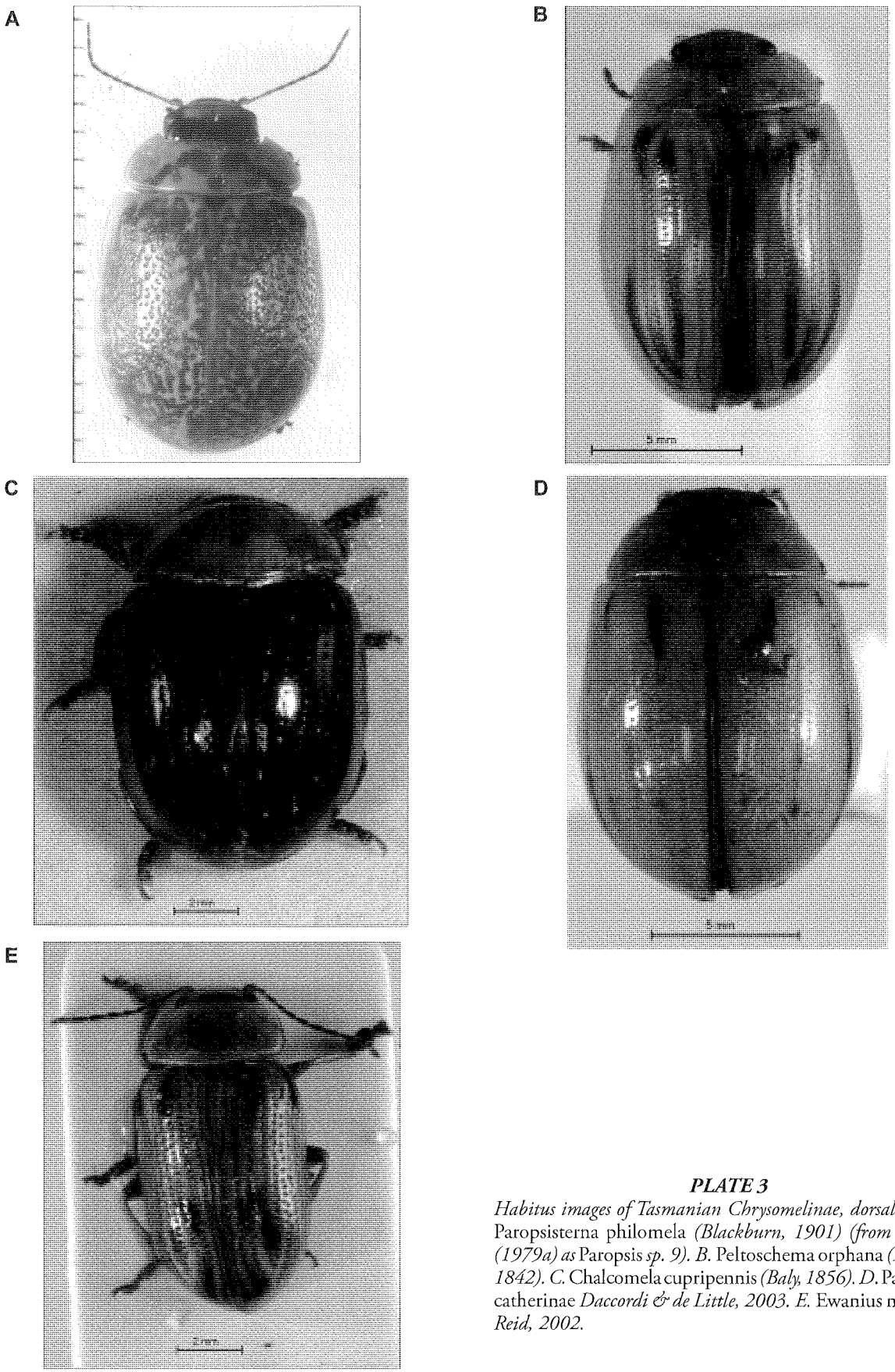


PLATE 3

Habitus images of Tasmanian Chrysomelinae, dorsal view. A. Paropsisterna philomela *(Blackburn, 1901) (from de Little (1979a) as* Paropsis *sp. 9). B.* Peltoschema orphana *(Erichson, 1842). C.* Chalcomela cupripennis *(Baly, 1856). D.* Paropsides catherinae *Daccordi & de Little, 2003. E.* Ewanius nothofagi *Reid, 2002.*

Geomela

Lea, A. M. 1916: *Transactions of the Royal Society of South Australia* 40: p. 397. (fig. 4H,I,J,K, pl. 1F)

Material examined: *Geomela* "sp.2"; Col.: anon; southwest Tasmania, 42°56'S, 145°50'E; litter; 18.ii.1977; Det.: JF Lawrence 1979; TMAG.

This genus is endemic to Australia with 13 described and several undescribed species (Reid 2006). Five species are recorded from Tasmania (table 1). Host plant families are Plantaginaceae (Jurado-Rivera *et al.* 2009), possibly Scrophulariaceae (Reid 2006). Host plants of Tasmanian species are unknown.

Paropsis

Olivier, A. G. 1807: *Entomologie, ou histoire naturelle des insectes, avec leur caractères génériques et spécifiques, leur description, leur synonymie, et leur figure énluminée. Coléoptères.* Desray, Paris. Vol. 5. p. 596. (figs 3F, 4A,B,C, pl. 1E)

Material examined: *P. tasmanica* Baly, 1866; Col.: GH Hardy; Hobart; 8.xi.1913; TMAG. *P. charybdis* Stål, 1860; Col.: DW de Little; Tiger Creek, Tasmania; 25.viii.1973; TMAG.

This genus is native to Australia (70 species) and New Guinea (two species) (Reid 2006) occurring on the family Myrtaceae (Reid 2006, Jurado-Rivera *et al.* 2009).

Eight species and subspecies are recorded from Tasmania (table 1). Adults, larvae and eggs of all these species were described by de Little (1979a). *Paropsis rubidipes* Blackburn, 1901, a Tasmanian endemic species, is unique in having the right-angled flanges at the base of the prosternal process, a diagnostic character for almost all *Paropsis* species, reduced to rounded tubercles (Reid 2006). The host genus for all Tasmanian species is *Eucalyptus* (de Little 1979a).

Occasional defoliation damage to Tasmanian commercial forests is caused by three species. *Paropsis porosa* (Erichson, 1842) defoliates young seedlings of *Eucalyptus nitens* Maiden and *E. globulus* Labill. in plantations; *P. delittlei* Selman, 1983 defoliates *E. obliqua* L'Hér. regrowth forests and *E. nitens* plantations; and *P. charybdis* Stål, 1860 defoliates *E. nitens* plantations (de Little 1989). *Paropsis charybdis* is also introduced in New Zealand where it is a pest of cultivated eucalypts (Selman 1963).

Calomela

Hope, F. W. 1840: *The coleopterist's manual, part the third, containing various families, genera, and species of beetles, recorded by Linnaeus and Fabricius. Also, descriptions of newly discovered and unpublished insects.* Bridgewater, Bowdery & Kerby, London: p. 166. (fig. 3G, pl. 2A)

Material examined: *C. curtisi* (Kirby, 1818); Col.: GH Hardy; Hobart; 10.xi.1913; TMAG. *C. macullicollis* (Boisduval, 1835); Col.: GH Hardy; Hobart; 29.xi.1913; TMAG.

Calomela is restricted to Australia and New Guinea where there are approximately 45 species (Reid 2006). The host genus is *Acacia* (Fabaceae) (Reid 2006, Jurado-Rivera *et al.* 2009). Two species are recorded from Tasmania (table 1) where they are collected on *Acacia* spp.

Dicranosterna

Motschulsky, V. 1860: *In*: Schrenk (Ed.), *Reisen und Forschungen im Amurlande.* Vol. 2. St. Petersburg: p. 193. (fig. 4N, pl. 2B)

Material examined: *D. immaculata* (Marsham, 1808); Col.: JR Cunningham; Kingston, Tasmania; 25.v.1951; (labelled *Paropsis biplagiata* Boheman); TMAG.

This genus is endemic to Australia where there are 34 species described (Reid 2006) The host genus is *Acacia* (Fabaceae) (Reid 2006, Jurado-Rivera *et al.* 2009). One species is recorded from Tasmania (table 1) where it feeds on foliage of *A. dealbata* Link.

Faex

Weise, J. 1901: *Archiv für Naturgeschichte* 67: p. 165. (fig. 4L, pl. 2C)

Material examined: *F. subfasciata planior* (Blackburn, 1898); Col.: DW de Little; Woolnorth, Tasmania; 6.ii.1980; on *Melaleuca ericifolia*; Sm. TMAG.

Reid (2006) states *Faex* is endemic to Australia and has approximately 10 species. The host family is Myrtaceae (Reid 2006, Jurado-Rivera 2009).

The single Tasmanian subspecies (table 1) was collected from species of *Leptospermum* J. R. Forst. & G. Forst. and *Melaleuca ericifolia* (Myrtaceae) (D. de Little unpubl. data).

Trachymela

Weise, J. 1908: *Die Fauna Südwest-Australiens,* 2(1): p. 7. (pl. 2D)

Material examined: *T. comma* (Blackburn, 1896); Col.: JW Evans; Lake St Clair, Tasmania; x.1939; TMAG.

This genus of approximately 120 species is native to Australia and New Guinea (Reid 2006). The host family is Myrtaceae (Reid 2006, Jurado-Rivera *et al.* 2009).

Six species are recorded from Tasmania (table 1). A further three species have been observed (D. de Little unpubl. data) making a total of nine *Trachymela* spp. occurring in Tasmania. Eggs of most species are deposited under loose bark. Larvae are crepuscular in their feeding habits, and rest under loose bark during daylight hours (de Little 1979b). *Trachymela rugosa* (Chapuis, 1877) is the exception, ovipositing on foliage and larvae remaining on foliage during daylight. Eight of the Tasmanian *Trachymela* spp. are collected from *Eucalyptus* (de Little 1979b) and one species occurs on *Callistemon pallidus* (Bonpl.)DC., both family Myrtaceae.

Paropsisterna

Motschulsky, V. 1860: *In*: Schrenk (Ed.), *Reisen und Forschungen im Amurlande.* Vol. 2. St. Petersburg: p. 192. (pls 2E, F, 3A)

Material examined: *P. morio* (Fabricius, 1787); Col.: GH Hardy; Hobart; 2.ix.1916; (labelled *Paropsis nigerrima* Germar); TMAG. *P. bimaculata* Col.: GF Bornemissza; Weldborough, Tasmania; 20.i.1983; TMAG; *P. philomela* (Blackburn, 1901); Col.: AP Andrews; Lake Pedder, Tasmania; no date; TMAG.

Paropsisterna (sensu lato) was recently redefined by Reid (2006) to include *Chrysophtharta* Weise, 1901 (including *Niliosoma* Motschulsky, 1860, and *Sterromela* Weise, 1915). The redefined genus includes approximately 110 species and

is native to Australia and New Guinea (Reid 2006). The host family is Myrtaceae (Reid 2006, Jurado-Rivera *et al.* 2009).

In Tasmania the redefined genus includes 17 described species (table 1). A further four species as yet unidentified or undescribed are known to occur in Tasmania (D. de Little unpubl. data). All Tasmanian species feed on *Eucalyptus* hosts (de Little 1979b, Selman 1983) with the exception of *P. obliterata* (Erichson, 1842) which has been observed feeding on *Melaleuca ericifolia* and *Leptospermum scoparium* J.R. Forst. & G. Forst. (both Myrtaceae) (D. de Little unpubl. data).

Adults of many species formerly classified in *Chrysophtharta* have bright, iridescent colours in life that fade after death, e.g., *P. aurea* (Blackburn, 1899), *P. nobilitata* (Erichson, 1842). These species oviposit on foliage and larvae spend their entire developmental period on foliage, sometimes in gregarious feeding groups (e.g. *P. bimaculata P. agricola*). Species formerly classified in *Sterromela* oviposit under loose bark and have crepuscular feeding larvae like most *Trachymela* species. *Paropsisterna lignea* (Erichson, 1842) is ovoviviparous (de Little 1979b). *Paropsisterna philomela* (Blackburn, 1901) and *P. crocata* (Boisduval, 1835) are two relatively large and rare species where the normal ten rows of elytral punctures are indistinguishable.

The genus contains some notable pests of Tasmanian commercial forestry, especially *P. bimaculata* which defoliates regrowth forests of *E. obliqua*, *E. regnans*, F. Muell. and *E. delegatensis* R. T. Baker (Greaves 1966). *Eucalyptus nitens* plantations can be severely defoliated by both *P. bimaculata* and *P. agricola* (de Little 1989). Another species erroneously identified as *P. gloriosa* (Blackburn, 1899) (C. Reid pers. comm.) occasionally defoliates *E. nitens* plantations in Tasmania and has recently been discovered in Ireland defoliating cultivated glaucous foliage eucalypts (F. Horgan pers. comm.)

Peltoschema

Reitter, E. 1880: *Verhandlungen des naturforschenden Vereines in Brünn,* 18(1879): p. 4. (fig. 3C, pl. 3B)

Material examined: *P. orphana* (Erichson, 1842); Col.: DW de Little; Florentine Valley, Tasmania; 29.v.1973; (labelled *Pyrgo orphana* (Erichson)); TMAG.

This genus comprising approximately 100 species is endemic to Australia (Reid 2006). Host plant families are Fabaceae (Reid 2006, Jurado-Rivera *et al.* 2009) and Apocynaceae, Asteraceae and Myrtaceae (Jurado-Rivera *et al.* 2009). Species in this genus have also been referred to under the names *Pyrgo* Weise, 1901, *Pyrgoides* Aslam, 1968, and *Acacicola* Lea, 1903 (Reid 2006).

Eight species are recorded from Tasmania (table 1). The best known species is *P. orphana* (commonly known as Fireblight Beetle, which can cause extensive defoliation and death of Silver Wattle, *Acacia dealbata* Link (Elliott 1978, Simmul & Clarke 1999). Tasmanian *Peltoschema* species are collected from *Acacia* (Fabaceae) (Elliott 1978, Daccordi & de Little 2003, de Little unpubl. data).

Reid (2006) synonymised *P. vestalis* Daccordi & de Little, 2003 with *P. delicatula* (Chapuis, 1877) (senior synonym); however, M. Daccordi (pers. comm.) who studied the Chapuis types considers *P. vestalis* to be a valid species.

Chalcomela

Baly, J. S. 1856: *Transactions of the Entomological Society, London,* 3(7): p. 256. (fig. 4D, pl. 3C)

Material examined: *C. cupripennis* (Baly, 1856); Col.: JR Cunningham; Kingston, Tasmania; 11.ix.1951; (labelled *Stethomela purpureipennis* Lea); TMAG.

Chalcomela comprising 17 known species is native to Australia and New Guinea and its host plant families are Celastraceae, Elaeocarpaceae and Rubiaceae (Reid 2006).

Reid (2006) synonymised *Stethomela purpureipennis* Lea, 1916 with *C. cupripennis* and noted that the type locality for *C. cupripennis*, Melbourne, seemed unlikely to be correct as no other species of *Chalcomela* was recorded from south of Sydney. The occurrence of this species in Tasmania (table 1) supports the southern Australian distribution of *C. cupripennis* providing it is not an accidental introduction. The host plant is unknown.

Paropsides

Motschulsky, V. 1860: *In*: Schrenk (Ed.), *Reisen und Forschungen im Amurlande.* Vol. 2. St. Petersburg: p. 192. (figs 3B,E,4E, pl. 3D)

Material examined: *P. catherinae* Daccordi & de Little, 2003; Col.: DW de Little; Surrey Hills, Tasmania; on *Leptospermum* sp.; 14.xii.1977; TMAG.

Paropsides, with 25 Australian species, is the most widely distributed of the genera that occur in Tasmania, having a global distribution from eastern Asia to eastern Australia (Reid 2006). Australian host families are Myrtaceae and Fabaceae (Reid 2006), and Sapindaceae (Jurado-Rivera *et al.* 2009). The east Asian type species, *P. duodecimpustulata* (von Gebler, 1825) feeds on Rosaceae (Reid 2006).

Four species are known from Tasmania (table 1). Known hosts are *Oxylobium ellipticum* (Vent.) R. Br., *Pultenea juniperina* Labill. (Fabaceae), and *Leptospermum* spp. (Myrtaceae) (Daccordi & de Little 2003, de Little unpubl. data).

Ewanius

Reid, C.A.M. 2002: *Coleopterist's Bulletin,* 56(4): p. 589. (figs 3D,4F, pl. 3E)

Material examined: *E. nothofagi* Col.: M Daccordi; Lake Fenton, Mt Field NP, Tasmania; 6.xii.1998; TMAG.

This monotypic genus containing *E. nothofagi* (table 1) is endemic to Tasmania where it feeds on *Nothofagus cunninghamii* (Hook.f.) Oerst. and possibly on *N. gunnii* (Hook.) Oerst. (Nothofagaceae) (Reid 2002, Daccordi & de Little 2003, Reid 2006).

ACKNOWLEDGEMENTS

Dr Genefor Walker-Smith, Dr Cathy Byrne and Ms Kirrily Moore (Tasmanian Museum and Art Gallery) provided valuable assistance with illustrations and photography. Dr Mauro Daccordi (Museo Civico di Storia Naturale, Verona, Italy) kindly commented on the manuscript, and gave permission to reproduce figs 1, 2, 1B and 1D. Ms Cristina Girad (Turin, Italy) is acknowledged for her artwork in fig. 1. Fig. 2 and pls 1B and 1D were drawn by Mr Roberto Pace (Turin, Italy).

REFERENCES

Blackburn, T. 1898: Revision of the Genus *Paropsis*. Part IV. *Proceedings of the Linnean Society of New South Wales* **23**(4): 656–700.

Blackburn, T. 1899: Revision of the Genus *Paropsis*. Part V. *Proceedings of the Linnean Society of New South Wales* **24**(3): 482–521.

Daccordi, M. 1994: Notes for phylogenetic study of Chrysomelinae, with descriptions of new taxa and a list of all the known genera (Coleoptera: Chrysomelidae, Chrysomelinae). *Proceedings of the third international symposium on the Chrysomelidae, Beijing, 1992,* Ed. David G. Furth. Backhuys, Leiden, Netherlands: 3–150.

Daccordi, M. & de Little, D.W. 2003: New taxa of Chrysomelinae of Tasmania (Coleoptera: Chrysomelidae: Chrysomelinae). *Monografie Museo regionale di Scienze naturali Torino* **35**: 343–378.

de Little, D. 1979a: A preliminary review of the genus *Paropsis* Olivier (Coleoptera: Chrysomelidae) in Tasmania. *Journal of the Australian Entomological Society* **18**: 91–107.

de Little, D.W. 1979b: Taxonomic and ecological studies of the Tasmanian *Eucalyptus*-defoliating paropsids (Coleoptera: Chrysomelidae). Unpublished PhD thesis: University of Tasmania: 492 pp.

de Little, D.W. 1989: Paropsine chrysomelid attack on plantations of *Eucalyptus nitens* in Tasmania. *New Zealand Journal of Forestry Science* **19**: 223–227.

Elliott, H.J. 1978: Studies on the fireblight beetle, *Pyrgoides orphana* (Erichson) (Coleoptera: Chrysomelidae) and its effect on the growth of silver wattle in Tasmania. *Australian Forestry* **41**(3): 160–166.

Greaves, R. 1966: Insect defoliation in the eucalypt regrowth in the Florentine Valley, Tasmania. *Appita* **19**: 119–126.

Ireson, J.E. 2002: Biological control of ragwort and boneseed. *Tasweeds* **16**: 2–3.

Jurado-Rivera, J.A., Vogler, A.P., Reid, C.A.M., Petitpierre. E. & Gómez-Zurita, J. 2009: DNA barcoding insect-host plant associations. *Proceedings of the Royal Society B.* **276**: 639–648; doi:10.1098/rspb.2008.1264

Lea, A.M. 1902: List of the described Coleoptera of Tasmania. *Report of the 9th meeting of AAAS, Proceedings of Section D*: 432–457.

Lea, A.M. 1904: Descriptions of new species of Australian Coleoptera. *Proceedings of the Linnean Society of New South Wales* **29**: 60–107.

Lea, A.M. 1916: Notes on some miscellaneous Coleoptera, with descriptions of new species, part II. *Transactions of the Royal Society of South Australia* **40**: 272–436.

Lea, A.M. 1917: Descriptions of new species of Australian Coleoptera. Part xiii. *Proceedings of the Linnean Society of New South Wales* **42**: 545–582.

Lea, A.M. 1929: Notes on miscellaneous Coleoptera, with descriptions of new species. *Transactions of the Royal Society of South Australia* **53**: 203–244.

Matthews, E.G. & Reid, C.A.M. 2002: *A Guide to the Genera of Beetles of South Australia, Part 8. Polyphaga: Chrysomeloidea: Chrysomelidae.* South Australian Museum, Adelaide: 64 pp.

Reid, C.A.M. 1993: Description of the *constricta* species of the genus *Chalcolampra* Blanchard (Coleoptera: Chrysomelidae: Chrysomelinae). *Journal of the Australian Entomological Society* **32**: 253–263.

Reid, C.A.M. 2002: A new genus of Chrysomelinae from Australia (Coleoptera: Chrysomelinae). *Coleopterist's Bulletin* **56**(4): 589–596.

Reid, C.A.M. 2006: A taxonomic revision of the Australian Chrysomelinae, with a key to the genera (Coleoptera: Chrysomelidae). *Zootaxa* **1292**: 119 pp.

Reid, C.A.M., Jurado-Rivera, J.A. & Beatson, M. 2009: A new genus of Chrysomelinae from Australia (Coleoptera: Chrysomelidae). *Zootaxa* **2207**: 53–66.

Rozefelds, A.C. 2008: Uniquely Tasmanian – A review of the phylogenetic and biogeographical relationships of Tasmania's endemic vascular plant genera. *Kanunnah* **2**: 35–86.

Selman, B.J. 1963: A reappraisal of the genus *Paropsis* Ol. (Chrysomelidae, Coleoptera), with particular reference to the species introduced into New Zealand. *Annals and Magazine of Natural History* **13**: 43–47.

Selman, B.J. 1983: The naming of the Tasmanian species of *Paropsis* Olivier (Coleoptera: Chrysomelidae). *Journal of the Australian Entomological Society* **22**: 333–339.

Simmul, T.L. & Clarke, A.R. 1999: Parasitism of *Acacicola orphana* (Erichson) (Coleoptera: Chrysomelidae) in Tasmania. *Australian Entomologist* **26**: 87–90.

Weise, J. 1916: Chrysomelidae: 12. Chrysomelinae. *Coleopterorum Catalogus* **68**: 1–255.

(accepted 3 October 2011)